

Claim Amendments

1. (currently amended) A method of refining glass in a melting unit, said melting unit comprising a continuously operable melting unit which melting unit comprises a portion to melt a feed material, said method comprising:

producing a melt of molten glass from feed material in said portion to melt a feed material;

minimizing at least one compound of nitrate in said melt by omitting said at least one compound of nitrate in the feed material ~~or by removing said at least one compound of nitrate from said melt of molten glass;~~

refining said melt by (i.), (ii.), (iii.), (iv.), and (v.):

(i.) introducing at least one fining agent in said melt;

(ii.) forming, in said melt, a first gas comprising at least one product of decomposition of the feed material;

(iii.) forming, in said melt, a second gas comprising at least one product of decomposition of said at least one fining agent;

(iv.) combining said first gas and said second gas into bubbles; and

(v.) heating said melt to substantially remove said bubbles

from said melt; and

said method further comprising:

introducing by blowing, during melting, a gas, comprising substantially oxygen, into said melt, and thereby setting and maintaining the reduction-oxidation state of said at least one fining agent in said melt of molten glass in the highest reduction-oxidation state.

2. (original) The method according to Claim 1, wherein:

said introducing by blowing said gas comprises blowing said gas in said portion for melting of said melting unit, from the bottom of said melt to the top of said melt, and beneath a batch blanket disposed on the top of said melt of molten glass.

3. (original) The method according to Claim 2, wherein:

said gas is blown in a quantity sufficient and for a period of time sufficient to maintain said at least one fining agent in said highest oxidation state to refine said melt.

4. (currently amended) The method according to Claim 3, wherein:

said gas comprises a ~~mixtures~~ mixture of oxygen and at least one inert gas comprising: helium, neon, argon, krypton, or nitrogen, carbon dioxide, and steam.

5. (original) The method according to Claim 4, wherein:
said oxygen is present in the range of from about 90 percent
by volume to about 100 percent by volume.

6. (original) The method according to Claim 5, wherein:
said gas comprises substantially pure oxygen.

7. (original) The method according to Claim 6, wherein:
said feed material comprises a lithium-aluminum-silicate glass.

8. (currently amended) A method of refining molten glass free
of nitrate compounds, comprising the steps of:

preparing a melt of molten glass free of nitrate compounds;
~~providing said melt comprising~~ at least one fining agent in ~~said
melt of molten glass~~;

introducing a gas, comprising substantially oxygen, into said
melt of molten glass to set the reduction-oxidation state of said at
least one fining agent in said melt of molten glass; and

removing refined glass.

9. (currently amended) The method according to Claim 8,
wherein:

said gas comprises a ~~mixtures~~ mixture of oxygen and at least
one inert gas comprising: helium, neon, argon, krypton, or nitrogen,
carbon dioxide, and steam.

10. (original) The method according to Claim 9, wherein:
said oxygen is present in the range of from about 90 percent by volume to about 100 percent by volume.
11. (original) The method according to Claim 10, wherein:
said gas comprises substantially pure oxygen.
12. (currently amended) In a method of making glass, a method of setting and maintaining the reduction-oxidation state of fining agents in a glass melt free of nitrate compounds, said setting and maintaining method comprising:
forming a melt of molten glass free of nitrate compounds;
~~providing said melt comprising~~ at least one fining agent in ~~said melt of molten glass~~; and
introducing, by blowing ~~during melting~~, a gas, comprising sufficient oxygen, into said melt, to set and maintain the reduction-oxidation state of said at least one fining agent in said melt of molten glass in the highest reduction-oxidation state.
13. (currently amended) The method according to Claim 12, wherein:
said gas comprises a ~~mixtures~~ mixture of oxygen and at least one inert gas comprising: helium, neon, argon, krypton, or nitrogen, carbon dioxide, and steam.

14. (original) The method according to Claim 13, wherein:
said oxygen is present in the range of from about 90 percent
by volume to about 100 percent by volume.

15. (original) The method according to Claim 14, wherein:
said gas comprises substantially pure oxygen

16-20. (canceled)

21. (new) The method according to Claim 8, wherein said
molten glass comprises an aluminosilicate glass.

22. (new) The method according to Claim 21, wherein said gas
comprises essentially oxygen.

23. (new) The method according to Claim 22, wherein said
molten glass comprises a lithium-aluminum-silicate glass comprising
Robax.

24. (new) The method according to Claim 12, wherein said
molten glass comprises an aluminosilicate glass.

25. (new) The method according to Claim 24, wherein:
said gas comprises essentially oxygen; and
said molten glass comprises a lithium-aluminum-silicate glass
comprising Robax.